

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application. Additions are identified by underlining. Deletions are indicated by ~~strikethrough~~ or [brackets].

1. (Original) A method for authenticating a party to a transaction, for use with a network in which packets entering the network have at least a part of layer 2 information replaced with a unique bit string, the method comprising:
 - a) examining at least a part of the unique bit string;
 - b) comparing the at least a part of the unique bit string examined with stored information; and
 - c) authenticating the party only if the at least a part of the unique bit string examined matches the stored information.
2. (Original) The method of claim 1 further comprising:
 - d) approving a transaction if the party was authenticated.
3. (Original) The method of claim 1 wherein the at least a part of the unique bit string examined depends on a type of the transaction.
4. (Original) The method of claim 2 wherein the stored information compared with the at least a part of the unique bit string examined depends on the type of the transaction.
5. (Original) The method of claim 3 wherein the type of the transaction is selected from a group of transaction types consisting of: (A) transactions greater than a predetermined amount; (B) transactions less than a predetermined amount; (C) purchases delivered to a credit card billing address; and (D) purchases delivered to an address other than a credit card billing address.
6. (Original) The method of claim 1 wherein the stored information compared with the at least a part of the unique bit string examined depends on a type of the transaction.

7. (Original) The method of claim 1 wherein the at least a part of the unique bit string examined identifies a location at which packets from the party to the transaction entered the network.
8. (Original) The method of claim 1 wherein the at least a part of the unique bit string examined identifies an individual who is a party to the transaction.
9. (Original) The method of claim 1 wherein the at least a part of the unique bit string examined identifies a group to which an individual, who is a party to the transaction, belongs.
10. (Original) The method of claim 1 wherein the at least a part of the unique bit string examined identifies a customer that is a party to the transaction.
11. (Original) The method of claim 1 wherein the at least a part of the unique bit string identifies at least one of a customer identification, an individual user identification, a network ingress location, and a user class.
12. (Original) The method of claim 1 wherein the at least a part of the unique bit string identifies at least two of a customer identification, an individual user identification, a network ingress location, and a user class.
13. (Original) The method of claim 1 wherein the at least a part of the unique bit string identifies at least three of a customer identification, an individual user identification, a network ingress location, and a user class.
14. (Original) The method of claim 1 wherein the unique bit string is provisioned by a network service provider.
15. (Original) The method of claim 1 wherein the unique bit string is controlled by a network service provider.

16. (Original) The method of claim 1 wherein the act of authenticating does not require the transmission of any authentication information from the party.

17. (Original) A method for tracking a network ingress location at which a packet associated with a transaction originated, wherein packets entering the network have at least a part of a layer 2 information replaced with a unique bit string, the method comprising:

- a) examining at least a part of the unique bit string; and
- b) determining the network ingress location from the at least a part of the unique bit string.

18. (Original) The method of claim 17 wherein the at least a part of the unique bit string examined identifies an individual who is a party to the transaction.

19. (Original) The method of claim 17 wherein the at least a part of the unique bit string examined identifies a group to which an individual, who is a party to the transaction, belongs.

20. (Original) The method of claim 17 wherein the at least a part of the unique bit string examined identifies a customer that is a party to the transaction.

21. (Original) The method of claim 17 wherein the at least a part of the unique bit string identifies at least one of a customer identification, an individual user identification, a network ingress location, and an individual user class.

22. (Original) The method of claim 17 wherein the unique bit string is provisioned by a network service provider.

23. (Original) The method of claim 17 wherein the unique bit string is controlled by a network service provider.

24. (Currently amended) A method for authenticating a party to a transaction for use with a network in which packets entering the network have a unique bit string applied to them, the method comprising:

- a) examining at least a part of the unique bit string;
- b) comparing the at least a part of the unique bit string examined with stored information; and
- c) approving a transaction only if the at least a part of the unique bit string examined matches the stored information,

wherein the unique bit string uniquely identifies the party and an ingress location of the network, and no information in addition to the unique bit string is needed for authenticating the party to the transaction.

25. (Original) The method of claim 24 wherein the unique bit string is applied to packets entering the network by replacing at least a part of a layer 2 information with the unique bit string.

26. (Original) The method of claim 24 wherein the unique bit string is maintained as the packet is communicated within the network.

27. (Original) The method of claim 25 wherein the unique bit string identifies a logical port at which the packet entered the network.

28. (Currently Amended) A method for authenticating a party to a transaction, the method comprising:

- a) applying a unique bit string to packets entering the network, the unique bit string uniquely identifying the party and an ingress location of the network;
- b) examining at least a part of the unique bit string;
- c) comparing the at least a part of the unique bit string examined with stored information; and
- d) approving a transaction only if the at least a part of the unique bit string examined matches the stored information.

29. (Original) The method of claim 28 wherein the act of applying a unique bit string to packets entering the network includes replacing at least a part of a layer 2 information with the unique bit string.

30. (Original) The method of claim 28 wherein the unique bit string is maintained as the packet is communicated within the network.

31. (Original) The method of claim 28 wherein the unique bit string identifies a logical port at which the packet entered the network.

32. (Original) The method of claim 28 wherein no information in addition to the unique bit string is needed for authenticating the party to the transaction.

33. (Original) An apparatus for authenticating a party to a transaction for use with a network in which packets entering the network have at least a part of a layer 2 information replaced with a unique bit string, the apparatus comprising:

- a) an input for accepting an authentication request;
- b) storage means for storing authentication information;
- c) means for examining at least a part of the unique bit string;
- d) a comparison facility for comparing the at least a part of the unique bit string examined with the stored authentication information; and
- e) means for authenticating a party to a transaction only if the at least a part of the unique bit string examined matches the stored authentication information.

34. (Original) The apparatus of claim 33 further comprising:

- f) means for approving the transaction if the party was authenticated.

35. (Original) The apparatus of claim 33 further comprising:

- f) an output for forwarding an authentication response to the transaction facility.

36. (Original) The apparatus of claim 34 further comprising:
g) an output for forwarding an authorization response to the transaction facility.